

AMENDMENTSIn the Claims

Please cancel claims 8, 18, 26, 36, 44, and 54 without prejudice.

Please amend claims 1, 3, 9, 19, 21, 27, 37, and 45 as shown herein.

Claims 1-7, 9-17, 19-25, 27-35, 37-43, 45-53 are pending and are listed following:

1. (currently amended) A method for use in a wireless communication system, the method comprising:

configuring a first device having a smart antenna to selectively allow a second device to operatively associate with a beam downlink transmittable to said second device using said smart antenna;

configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna;

configuring said first device to determine if said associated second device should operatively associate with a different beam downlink transmittable using said smart antenna based on said determined information; and

if said associated second device should operatively associate with a different beam, then configuring said first device to allow said second device to operatively associate with said different beam by at least one of configuring said first device to identify that said second device is allowed to operatively associate with said different beam, or configuring said first device to identify that said second device is not allowed to operatively associate with said beam.

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2           **2. (original)** The method as recited in Claim 1, wherein said first  
3 device includes an access point device and said second device includes a client  
4 device.

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6           **3. (currently amended)** The method as recited in Claim 1,  
7 wherein configuring said first device to determine information from at least one  
8 uplink transmission receivable from said second device through said smart antenna  
9 further includes:

10           configuring said first device to be capable of receiving uplink transmittable  
11 messages through said smart antenna; and

12           configuring said first device to be capable of passively gathering signal  
13 parameter information from a plurality of said uplink transmittable messages.

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15           **4. (original)** The method as recited in Claim 1, wherein configuring  
16 said first device to determine information from at least one uplink transmission  
17 receivable from said second device through said smart antenna further includes:

18           configuring said first device to be capable of receiving at least one uplink  
19 transmittable message through said smart antenna;

20           configuring said first device to actively probe said second device by  
21 outputting a signal suitable for causing said smart antenna to transmit at least one  
22 downlink transmittable message over at least said different beam; and

23           configuring said first device to gather signal parameter information from  
24 said least one uplink transmittable message.

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1           **5. (original)** The method as recited in Claim 4, wherein configuring  
2 said first device to determine information from at least one uplink transmission  
3 receivable from said second device through said smart antenna further includes:

4           configuring said first device to be capable of receiving a plurality of uplink  
5 transmittable messages through said smart antenna;

6           configuring said first device to actively probe said second device by  
7 outputting a signal suitable for causing said smart antenna to transmit at least one  
8 downlink transmittable message separately over each of a group of beams  
9 comprising said beam and said different beam; and

10          configuring said first device to gather signal parameter information from  
11 each of said plurality of uplink transmittable messages.

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13           **6. (original)** The method as recited in Claim 1, wherein configuring  
14 said first device to determine information from at least one uplink transmission  
15 receivable from said second device through said smart antenna further includes:

16          configuring said first device to be capable of determining information about  
17 a current position of said second device relative to said smart antenna.

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19           **7. (original)** The method as recited in Claim 1, wherein configuring  
20 said first device to determine if said associated second device should operatively  
21 associate with said different beam downlink transmittable using said smart antenna  
22 based on said determined information further includes:

23          configuring said first device to be capable of comparing said determined  
24 information to corresponding beam association threshold information.  
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2       **8.     (canceled)**

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4       **9.     (currently amended)**     A method for use in a wireless  
5 communication system, the method comprising:

6       determining if a client device that is currently operatively associated with a  
7 beam that is being downlink transmitted to said client device from an access point  
8 device using a smart antenna should instead be operatively associated with a  
9 different beam downlink transmitted from said smart antenna based on  
10 information determined from at least one uplink transmission received from said  
11 client device through said smart antenna; and

12       if determined that said associated client device should be operatively  
13 associated with a different beam, then causing said access point device to force  
14 said client device to operatively associate with said different beam by causing said  
15 access point device to temporarily stop transmitting to said client device using said  
16 beam.

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18       **10.   (original)**     The method as recited in Claim 9, wherein determining  
19 if said client device that is currently operatively associated with said beam should  
20 instead be operatively associated with said different beam further includes:

21       with said access point device, receiving uplink transmittable messages from  
22 said client device through said smart antenna and passively gathering signal  
23 parameter information from a plurality of said uplink transmittable messages.  
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1           **11. (original)** The method as recited in Claim 9, wherein determining  
2 if said client device that is currently operatively associated with said beam should  
3 instead be operatively associated with said different beam further includes:

4           causing said access point device to transmit at least one probe message to  
5 said client device over at least said different beam;

6           receiving at least one uplink transmitted probe response message in  
7 response to said probe message through said smart antenna; and

8           gathering signal parameter information from said probe response message.  
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10           **12. (original)** The method as recited in Claim 11, wherein  
11 determining if said client device that is currently operatively associated with said  
12 beam should instead be operatively associated with said different beam further  
13 includes:

14           comparing said signal parameter information to corresponding beam  
15 association threshold information.  
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1       **13. (original)** The method as recited in Claim 11, wherein  
2 determining if said client device that is currently operatively associated with said  
3 beam should instead be operatively associated with said different beam further  
4 includes:

5           causing said first device to transmit at least one downlink transmitted probe  
6 message separately over each of a group of beams comprising said beam and said  
7 different beam;

8           receiving a plurality of corresponding uplink transmitted probe response  
9 messages through said smart antenna; and

10          gathering signal parameter information from each of said plurality of probe  
11 response messages.

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13       **14. (original)** The method as recited in Claim 13, wherein  
14 determining if said client device that is currently operatively associated with said  
15 beam should instead be operatively associated with said different beam further  
16 includes:

17          comparing said signal parameter information to corresponding beam  
18 association threshold information.

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20       **15. (original)** The method as recited in Claim 9, wherein determining  
21 if said client device that is currently operatively associated with said beam should  
22 instead be operatively associated with said different beam further includes:

23          determining information about a current position of said client device  
24 relative to said smart antenna.  
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2       **16. (original)** The method as recited in Claim 9, wherein causing  
3 said access point device to force said client device to operatively associate with  
4 said different beam further includes at least one of the following:

5       identifying that said client device is allowed to operatively associate with  
6 said different beam; and

7       identifying that said client device is not allowed to operatively associate  
8 with said beam.

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10       **17. (original)** The method as recited in Claim 9, wherein causing  
11 said access point device to force said client device to operatively associate with  
12 said different beam further includes:

13       causing said access point device to send a disassociate message to said  
14 client device.

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16       **18. (canceled)**  
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1           **19. (currently amended)**   A computer-readable medium having  
2 computer executable instructions for causing logic to perform acts comprising:

3           configuring a first device having a smart antenna to selectively allow a  
4 second device to operatively associate with a beam downlink transmittable to said  
5 second device using said smart antenna;

6           configuring said first device to determine information from at least one  
7 uplink transmission receivable from said second device through said smart  
8 antenna;

9           configuring said first device to determine if said associated second device  
10 should operatively associate with a different beam downlink transmittable using  
11 said smart antenna based on said determined information; and

12           if said associated second device should operatively associate with a  
13 different beam, then configuring said first device to allow said second device to  
14 operatively associate with said different beam by at least one of configuring said  
15 first device to identify that said second device is allowed to operatively associate  
16 with said different beam, or configuring said first device to identify that said  
17 second device is not allowed to operatively associate with said beam.

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19           **20. (original)**   The computer-readable medium as recited in Claim 19,  
20 wherein said first device includes an access point device and said second device  
21 includes a client device.



1       **21. (currently amended)**     The computer-readable medium as  
2 recited in Claim 19, wherein configuring said first device to determine information  
3 from at least one uplink transmission receivable from said second device through  
4 said smart antenna further includes:

5       configuring said first device to be capable of receiving uplink transmittable  
6 messages through said smart antenna; and

7       configuring said first device to be capable of passively gathering signal  
8 parameter information from a plurality of said uplink transmittable messages.

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10       **22. (original)**     The computer-readable medium as recited in  
11 Claim 19, wherein configuring said first device to determine information from at  
12 least one uplink transmission receivable from said second device through said  
13 smart antenna further includes:

14       configuring said first device to be capable of receiving at least one uplink  
15 transmittable message through said smart antenna;

16       configuring said first device to actively probe said second device by  
17 outputting a signal suitable for causing said smart antenna to transmit at least one  
18 downlink transmittable message over at least said different beam; and

19       configuring said first device to gather signal parameter information from  
20 said least one uplink transmittable message.

1       **23. (original)** The computer-readable medium as recited in Claim 22,  
2 wherein configuring said first device to determine information from at least one  
3 uplink transmission receivable from said second device through said smart antenna  
4 further includes:

5       configuring said first device to be capable of receiving a plurality of uplink  
6 transmittable messages through said smart antenna;

7       configuring said first device to actively probe said second device by  
8 outputting a signal suitable for causing said smart antenna to transmit at least one  
9 downlink transmittable message separately over each of a group of beams  
10 comprising said beam and said different beam; and

11       configuring said first device to gather signal parameter information from  
12 each of said plurality of uplink transmittable messages.

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14       **24. (original)** The computer-readable medium as recited in Claim 19,  
15 wherein configuring said first device to determine information from at least one  
16 uplink transmission receivable from said second device through said smart antenna  
17 further includes:

18       configuring said first device to be capable of determining information about  
19 a current position of said second device relative to said smart antenna.  
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1       **25. (original)**   The computer-readable medium as recited in Claim 19,  
2 wherein configuring said first device to determine if said associated second device  
3 should operatively associate with said different beam downlink transmittable using  
4 said smart antenna based on said determined information further includes:

5       configuring said first device to be capable of comparing said determined  
6 information to corresponding beam association threshold information.

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8       **26. (canceled)**

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10       **27. (currently amended)**   An apparatus for use in a wireless  
11 communication system, the apparatus comprising:

12       means for transmitting a plurality of smart antenna beams;

13       means for determining if a client device that is currently operatively  
14 associated with a first smart antenna beam should instead be operatively  
15 associated with a second smart antenna beam based on information determined  
16 from at least one transmission received from said client device; and

17       means for forcing said client device to operatively associate with said  
18 second smart antenna beam when it is determined that said client device should be  
19 operatively associated with second smart antenna beam; and

20       means for causing an access point device to temporarily stop transmitting to  
21 said client device using said first smart antenna beam.

1       **28. (original)** The apparatus as recited in Claim 27, further  
2 comprising:

3       means for passively gathering signal parameter information from a plurality  
4 of uplink transmitted messages from said client device.

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6       **29. (original)** The apparatus as recited in Claim 27, further  
7 comprising:

8       means for transmitting at least one probe message to said client device over  
9 at least said second smart antenna beam;

10       means for receiving at least one uplink transmitted probe response message  
11 in response to said probe message; and

12       means for gathering signal parameter information from said probe response  
13 message.

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15       **30. (original)** The apparatus as recited in Claim 29, further  
16 comprising:

17       means for comparing said signal parameter information to corresponding  
18 beam association threshold information.

1       **31. (original)** The apparatus as recited in Claim 29, further  
2 comprising:

3           means for transmitting at least one downlink transmitted probe message  
4 separately over each of a group of smart antenna beams comprising said first and  
5 second smart antenna beams;

6           means for receiving a plurality of corresponding uplink transmitted probe  
7 response messages; and

8           means for gathering signal parameter information from each of said  
9 plurality of probe response messages.

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11       **32. (original)** The apparatus as recited in Claim 31, further  
12 comprising:

13           means for comparing said signal parameter information to corresponding  
14 smart antenna beam association threshold information.

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16       **33. (original)** The apparatus as recited in Claim 27, further  
17 comprising:

18           means for determining information about a current position of said client  
19 device.

1       **34. (original)** The apparatus as recited in Claim 27, further  
2 comprising at least one of the following:

3       means for identifying that said client device is allowed to operatively  
4 associate with said second smart antenna beam; and

5       means for identifying that said client device is not allowed to operatively  
6 associate with said first smart antenna beam.

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8       **35. (original)** The apparatus as recited in Claim 27, further  
9 comprising:

10       means for sending a disassociate from first smart antenna beam message to  
11 said client device.

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13       **36. (canceled)**  
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1       **37. (currently amended)**     An apparatus for use in a wireless  
2 communication system, the apparatus comprising:

3       at least one smart antenna;

4       at least one transceiver operatively coupled to said smart antenna and  
5 configured to send and receive electromagnetic signals using said smart antenna;  
6 and

7       logic operatively coupled to said transceiver and configured to selectively  
8 allow a second device to operatively associate with a beam downlink transmittable  
9 to said second device using said smart antenna, determine information from at  
10 least one uplink transmission receivable from said second device through said  
11 smart antenna, determine if said associated second device should operatively  
12 associate with a different beam downlink transmittable using said smart antenna  
13 based on said determined information, and if said associated second device should  
14 operatively associate with a different beam, then allow said second device to  
15 operatively associate with said different beam and selectively identify that said  
16 second device is not allowed to operatively associate with said beam.

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18       **38. (original)**     The apparatus as recited in Claim 37, wherein said  
19 logic is further configured to passively gathering signal parameter information  
20 from a plurality of said uplink transmittable messages received by said transceiver  
21 using said smart antenna.  
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1       **39. (original)** The apparatus as recited in Claim 37, wherein said  
2 logic is further configured to:

3       actively probe said second device by causing said transceiver to output a  
4 signal to said smart antenna that causes said smart antenna to transmit at least one  
5 downlink transmittable message over at least said different beam; and

6       gather signal parameter information from said least one uplink  
7 transmittable message received by said transceiver using said smart antenna.

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9       **40. (original)** The apparatus as recited in Claim 39, wherein said  
10 logic is further configured to:

11       actively probe said second device by causing said transceiver to output a  
12 signal suitable to said smart antenna that causes said smart antenna to transmit at  
13 least one downlink transmittable message separately over each of a group of  
14 beams comprising said beam and said different beam; and

15       gather signal parameter information from each of said plurality of uplink  
16 transmittable messages received by said transceiver using said smart antenna.

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18       **41. (original)** The apparatus as recited in Claim 37, wherein said  
19 logic is further configured to:

20       determine information about a current position of said second device  
21 relative to said smart antenna.



1       **42. (original)** The apparatus as recited in Claim 37, wherein said  
2 logic is further configured to:

3       compare said determined information to corresponding beam association  
4 threshold information.

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6       **43. (original)** The apparatus as recited in Claim 37, wherein said  
7 logic is further configured:

8       selectively identify that said second device is allowed to operatively  
9 associate with said different beam.

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11       **44. (canceled)**  
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1       **45. (currently amended)**     A wireless communication system  
2 comprising:

3       at least one client device; and

4       at least one access point device operatively coupled to said client device  
5 over a wireless link and therein capable of transmitting a plurality of smart  
6 antenna beams, determining if said client device that is currently operatively  
7 associated with a first smart antenna beam should instead be operatively  
8 associated with a second smart antenna beam based on information determined  
9 from at least one transmission received from said client device, and causing said  
10 client device to operatively associate with said second smart antenna beam when it  
11 is determined that said client device should be operatively associated with second  
12 smart antenna beam, and temporarily stopping transmission to said client device  
13 using said first smart antenna beam.

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15       **46. (original)**     The system as recited in Claim 45, wherein said access  
16 point device is further configured to gather signal parameter information from a  
17 plurality of uplink transmitted messages from said client device.

1       **47. (original)**   The system as recited in Claim 45, wherein said  
2 access point device is further configured to:

3       transmit at least one probe message to said client device over at least said  
4 second smart antenna beam;

5       receive at least one uplink transmitted probe response message in response  
6 to said probe message; and

7       gather signal parameter information from said probe response message.  
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9       **48. (original)**   The system as recited in Claim 47, wherein said access  
10 point device is further configured to compare said signal parameter information to  
11 corresponding beam association threshold information.  
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13       **49. (original)**   The system as recited in Claim 47, wherein said access  
14 point device is further configured to:

15       transmit at least one downlink transmitted probe message separately over  
16 each of a group of smart antenna beams comprising said first and second smart  
17 antenna beams;

18       receive a plurality of corresponding uplink transmitted probe response  
19 messages; and

20       gather signal parameter information from each of said plurality of probe  
21 response messages.  
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1       **50. (original)**   The system as recited in Claim 49, wherein said access  
2 point device is further configured to compare said signal parameter information to  
3 corresponding smart antenna beam association threshold information.

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5       **51. (original)**   The system as recited in Claim 45, wherein said access  
6 point device is further configured to determine information about a current  
7 position of said client device.

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9       **52. (original)**   The system as recited in Claim 45, wherein said access  
10 point device is further configured to perform at least one of the following:

11       identify that said client device is allowed to operatively associate with said  
12 second smart antenna beam; and

13       identify that said client device is not allowed to operatively associate with  
14 said first smart antenna beam.

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16       **53. (original)**   The system as recited in Claim 45, wherein said access  
17 point device is further configured to send a disassociate from first smart antenna  
18 beam message to said client device.

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20       **54. (canceled)**